

Lat 40.21799 Lon -122.7612



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Department of  
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Subject: Douglas-fir Tussock Moth Pheromone Detection Survey 2004 Report (NE05-01)

To: Forest Supervisors: Eldorado, Inyo, Lassen, Plumas, Modoc, Sierra, Stanislaus, Sequoia and Tahoe National Forests and the Lake Tahoe Basin Management Unit

Enclosed are the results of the 2004 cooperative Douglas-fir tussock moth (DFTM) pheromone detection survey (Table 1). During 2004 traps were installed in 174 plots (5 traps/plot) with data collected for 162 plots (12 plots were snowed out prior to data collection). There were 117 (67%) plots with an average of <25 males per trap and 45 plots (26%) that averaged 25 or more moths per trap. In comparison, 35 % of the plots averaged >25 males moths per trap in 2003. Plots that averaged >25 moths per trap for 2003 were located on the following Ranger Districts: Amador and Placerville (Eldorado NF), Almanor (Lassen NF), Big Valley (Modoc NF), Mt. Hough (Plumas NF), Hume Lake (Sequoia NF), Bass Lake (Sierra NF), Calaveras and Miwok (Stanislaus NF) and American River, Nevada City and Yuba River (Tahoe NF). In addition to these plots monitored on National Forest lands there were seven plots that exceeded an average of 25 moths/trap on lands of other ownership. Four of these plots were located in Yosemite National Park, 1 on B.L.M. land near Widow Peak, west of the town of Bieber in Lassen county, and 2 plots, 1 each in Calaveras and Shasta counties, monitored by C.D.F.

During 2004 low levels of larval activity and very light feeding injury, restricted to current years foliage, were observed on the following National Forests: Eldorado, Stanislaus, Sierra, and Sequoia. Low levels of larval activity and very light feeding injury were also observed in Yosemite National Park. Limited egg mass sampling on the Stanislaus National Forest, Sierra National Forest and in Yosemite National Park indicate that if egg and larval survival are good, an increase in levels of defoliation can be expected in 2005.

Increases and declines in trap counts are very common with DFTM populations. Based on the results of the 2004 monitoring, there may be some increases in activity in 2005. During the field season of this year Forest Health Protection staff will monitor other life stages in the areas where DFTM activity exceeded an average of 25 males/trap and/or where notable larval activity occurred. Land managers will be notified of the results of the additional monitoring. Field going personnel are urged to continue to check for evidence of feeding and defoliation on white fir throughout the susceptible host type this coming summer and fall and report any findings to their Forest Health Protection Shared Services Office.

Sufficient trapping materials have been ordered for the detection survey plots for 2005. They will be distributed to cooperators in June or July of this year. Please direct any questions and/or



**NUMBER OF DOUGLAS-FIR TUSsock MOTH PHEROMONE  
DETECTION SURVEY PLOTS BY TRAP CATCH 1979-2004**

Year	Total Number Plots	NUMBER OF PLOTS WITH AN AVERAGE MOTH CATCH PER TRAP OF:														
		0<10	10<20	20<25	25<30	30<35	35<40	40<45	45<50	50<55	55<60	60<65	65<70	70<75	75+	
1979	102	97	2	1	1	0	1	0	0	0	0	0	0	0	0	
	100%	95%	2%	1%	1%		1%									
1980	99	99	0	0	0	0	0	0	0	0	0	0	0	0	0	
	100%	100%														
1981	93	78	10	4	1	0	0	0	0	0	0	0	0	0	0	
	100%	84%	10%	4%	2%											
1982	95	93	1	0	1	0	0	0	0	0	0	0	0	0	0	
	100%	98%	1%		1%											
1983	98	87	6	1	1	3	0	0	0	0	0	0	0	0	0	
	100%	89%	6%	1%	1%	3%										
1984	111	51	18	11	5	7	8	4	3	4	0	0	0	0	0	
	100%	46%	16%	10%	4%	6%	7%	4%	3%	4%						
1985	105	58	14	4	7	6	5	1	2	4	1	2	0	1	0	
	100%	55%	13%	4%	6%	6%	5%	1%	2%	4%	1%	2%		1%		
1986	107	64	16	4	8	6	1	3	0	1	0	1	1	1	1	
	100%	60%	15%	3%	7%	6%	1%	3%		1%		1%	1%	1%	1%	
1987	108	80	15	4	2	1	1	3	0	1	0	0	1	0	0	
	100%	74%	14%	4%	2%	1%	1%	2%		1%			1%			
1988	124	106	9	3	3	0	2	1	0	0	0	0	0	0	0	
	100%	86%	7%	2%	2%		2%	1%								
1989	130	129	1	0	0	0	0	0	0	0	0	0	0	0	0	
	100%	99%	1%													
1990	138	135	1	0	1	1	0	0	0	0	0	0	0	0	0	
	100%	97%	1%		1%	1%										
1991	143	135	4	1	0	0	2	1	0	0	0	0	0	0	0	
	100%	94%	3%	1%			1%	1%								
1992	164	156	3	0	2	1	0	0	0	0	1	0	1	0	0	
	100%	95%	1%		1%	1%					1%		1%			
1993	143	135	8	0	0	0	0	0	0	0	0	0	0	0	0	
	100%	94%	6%													
1994	151	139	11	1	0	0	0	0	0	0	0	0	0	0	0	
	100%	92%	7%	1%												
1995	158	77	35	13	16	7	7	3	0	0	0	0	0	0	0	
	100%	49%	22%	8%	10%	4.5%	4.5%	2%								
1996	149	33	26	16	8	7	12	9	5	8	6	8	5	1	5	
	100%	22%	17%	11%	6%	4%	8%	6%	3%	6%	4%	6%	3%	1%	3%	
1997	142	88	27	10	9	4	3	0	0	1	0	0	0	0	0	
	100%	62%	19%	7%	6%	3%	2%			<1%						
1998	159	81	22	11	9	6	3	10	7	5	2	1	1	1	0	
	100%	51%	14%	7%	6%	3%	2%	6%	4%	3%	<1%	<1%	<1%	<1%		
1999	159	126	20	5	3	2	2	0	0	0	1	0	0	0	0	
	100%	79%	13%	3%	2%	1%	1%				1%					
2000	185	154	15	4	4	0	1	2	2	2	0	0	1	0	0	
	100%	83%	8%	2%	2%		<1%	1%	1%	1%			<1%			
2001	183	95	57	13	10	6	0	1	1	0	0	0	0	0	0	
	100%	52%	31%	7%	5%	3%		<1%	<1%							
2002	168	126	31	5	3	3	0	0	0	0	0	0	0	0	0	
	100%	75%	18%	3%	2%	2%										
2003	163	53	42	11	11	10	14	13	3	1	4	0	1	0	0	
	100%	32%	26%	7%	7%	6%	8%	8%	2%	1%	2%		1%			
2004	174	68	43	6	16	11	6	5	3	0	2	1	1	0	0	
	* 93%	39%	25%	3%	9%	6%	3%	3%	2%		1%	<1%	<1%			